

REMARKS

Favorable reconsideration of this application is requested in view of the above amendment and the following remarks. Claim 1 has been amended. Support for the amendment is found in Fig. 1; paragraph 20, lines 1-7; paragraph 10, line 1; paragraph 22, lines 1-2; paragraph 23, lines 4-10; paragraph 25; Claims 1, 3-8 are pending. Favorable reconsideration of this application is requested in view of the above amendment and the following remarks.

Objections

The Examiner has objected to claim 5, because the recitation of “formed as” in claim 5 is considered to be unclear. We assume that the Examiner is referring to the term “formed by”, which is the wording in claim 5.

Applicants submit that Claim 5 is in proper form as a product by process claim, which is a well-recognized product claim format in U.S. practice. Withdrawal of the objection is requested.

Claim Rejections Under 35 USC § 112

Claims 1 and 3-8, were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended claim 1 to ensure proper antecedent basis for “the wall of the reserve tank”. Withdrawal of the rejection is requested.

Claim Rejections Under 35 USC § 103(a)

Claims 1, 3-5 are rejected as being unpatentable over Crowley (US Patent No. 5,715,825) in view of Abe (JP 20022078673). This rejection is traversed.

The ultrasonic probe in claim 1 comprises an elastic reserve tank having a wall disposed at the grip portion and a pipe for communication between an area enclosed by the sound window and the elastic reserve tank, both of which are disposed inside the probe chassis. The charged sound propagation liquid is in the area enclosed by the

sound window, in the elastic reserve tank and in the pipe. Further the wall of the elastic reserve tank has its own wall that is separate from the internal wall of the probe chassis at the grip portion. The cited references fail to disclose or suggest all of these features.

Due to the configuration of the ultrasonic probe in claim 1, the capacity of the elastic reserve tank changes with the change in pressure of the sound propagation liquid in the area enclosed by the sound window, thereby relieving the change of pressure of the sound propagation liquid. Even when an operator holds the probe chassis at the grip portion, the pressure caused by the grip does not impose an influence on the elastic reserve tank since the wall of the elastic reserve tank is separate from the internal wall of the probe chassis. Therefore, the pressure of the sound propagation liquid enclosed by the sound window is maintained so as to provide a correct propagation of the ultrasonic wave.

The rejection argues that the catheter sheath 12 of Crowley corresponds to the elastic reserve tank in claim 1. The rejection also argues that the portion above the holding bracket 21 (hereinafter "cylindrical member") in Fig. 7 of Crowley corresponds to the grip portion in claim 1. Applicants disagree. Claim 1 requires the probe chassis to be formed integrally with the grip portion and that the elastic reserve tank have its own wall and be disposed inside of the probe chassis at the grip portion. Unlike the elastic reserve tank of claim 1, the catheter sheath 12 of Crowley is not disposed inside of a probe chassis. The catheter sheath of Crowley cannot maintain the pressure of the sound propagation liquid if external pressure is applied, and the effects of claim 1 cannot be obtained. Claim 1 requires that the elastic reserve tank be able to absorb the pressures of the charged sound propagation liquid to maintain the pressure within and shape of the sound window. The catheter sheath of Crowley cannot relieve the pressure and it does not correspond to the reserve tank.

Crowley has no description about the configuration of a portion covered with the cylindrical member. Crowley fails to describe either the elastic reserve tank or the feature that the wall of the elastic reserve tank is formed separate from the internal wall of the probe chassis at the grip portion. Moreover there is no description for suggesting the maintenance of the pressure of the sound propagation liquid.

For at least these reasons, claim 1 is not suggested by the combination of Crowley and Abe and should be allowed. Claims 3-8 depend from Claim 1 and should be allowed for at least the same reasons.

Applicants request an early allowance of this application. If there are any remaining issues that can be easily resolved with a telephone call, the Examiner is invited to call the attorney of record, Mr. Douglas P. Mueller at 612. 455.3804.



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Respectfully submitted,

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